

Title (en)

HIGH-PRESSURE TURBINE BLADE COMPRISING A CAVITY UNDER A SQUEALER TIP

Title (de)

HOCHDRUCKTURBINENSCHAUFEL MIT EINEM HOHLRAUM UNTER EINER QUETSCHSPITZE

Title (fr)

AUBE DE TURBINE HAUTE PRESSION COMPORTANT UNE CAVITÉ SOUS BAIGNOIRE

Publication

EP 4259376 A1 20231018 (FR)

Application

EP 21847990 A 20211208

Priority

- FR 2012855 A 20201210
- FR 2021052242 W 20211208

Abstract (en)

[origin: WO2022123177A1] Method for manufacturing a turbomachine blade (11) comprising a pressure-side wall (14) and a suction-side wall (15) spaced apart from one another, said blade (11) comprising a tip (S) with:
• - a bottom wall (18) extending from the pressure-side wall (14) to the suction-side wall (15) which each comprise a free edge (19, 21) that extends beyond said bottom wall (18) to define, jointly with said bottom wall (18), a squealer tip shape (B);
• - a dividing wall (22) extending from the pressure-side wall (14) to the suction-side wall (15) while being spaced apart from the bottom wall (18) in order to define, with said bottom wall (18), a cavity under the squealer tip (C);
the method comprising:
• - a molding step to create at least the pressure-side wall (14), the suction-side wall (15) and the dividing wall (22);
• - a step of creating the bottom wall (18) with an additive manufacturing method by adding metal material.

IPC 8 full level

B23P 15/04 (2006.01); **B22F 10/20** (2021.01); **B23K 26/00** (2014.01); **B23K 26/342** (2014.01); **B23P 6/00** (2006.01); **B33Y 10/00** (2015.01);
B33Y 80/00 (2015.01); **F01D 5/14** (2006.01); **F01D 5/20** (2006.01); **B23K 101/00** (2006.01)

CPC (source: EP US)

B22F 5/04 (2013.01 - EP); **B22F 7/062** (2013.01 - EP); **B22F 10/25** (2021.01 - EP); **B22F 10/28** (2021.01 - US); **B23K 26/0006** (2013.01 - EP);
B23K 26/342 (2015.10 - EP US); **B23P 15/006** (2013.01 - US); **B23P 15/04** (2013.01 - EP); **B33Y 10/00** (2014.12 - EP);
B33Y 80/00 (2014.12 - EP US); **F01D 5/147** (2013.01 - EP); **F01D 5/18** (2013.01 - US); **F01D 5/186** (2013.01 - US); **F01D 5/187** (2013.01 - US);
F01D 5/20 (2013.01 - EP US); **F01D 25/12** (2013.01 - US); **B23K 2101/001** (2018.07 - EP); **B23P 6/007** (2013.01 - EP);
F05D 2230/11 (2013.01 - EP); **F05D 2230/12** (2013.01 - EP); **F05D 2230/211** (2013.01 - EP); **F05D 2230/22** (2013.01 - EP);
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F05D 2260/607 (2013.01 - EP US); **Y02P 10/25** (2015.11 - EP); **Y02T 50/60** (2013.01 - EP); **Y10T 29/49321** (2015.01 - US)

Citation (search report)

See references of WO 2022123177A1

Designated contracting state (EPC)

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